

REPORT ON MACHINERY

No. 71444
TUE 10 DEC 1918

Received at London Office

Date of writing Report 30 Dec 1918 When handed in at Local Office 30 Dec 1918 Part of NEWCASTLE-ON-TYNE 11 Dec 1918

No. in Survey held at Jarrow & Sunderland Date, First Survey 3rd April 1918 Last Survey 21st Nov 1918

Reg. Book. 597 on the S.S. War. Pundit. (Number of Visits 62 67 Tons Gross 5549 Net 3480)

Master J. Stevens Built at Sunderland By whom built Sir J. Laing & Son Ltd When built 1918

Engines made at Jarrow By whom made Palmers Co Ltd 891 when made 1918

Boilers made at Jarrow By whom made Palmers Co Ltd 891 when made 1918

Registered Horse Power Owner The Shipping Controller Port belonging to British London

Nom. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27" 44" 73" Length of Stroke 48" Revs. per minute 77 Dia. of Screw shaft as per rule 14.66 as fitted 15.12 Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight

in the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5-0 1/2"

Dia. of Tunnel shaft as per rule 13.32 as fitted 13.1/2 Dia. of Crank shaft journals as per rule 14.1/2 as fitted 14.1/2 Dia. of Crank pin 14.1/2 Size of Crank web 22 1/2 x 9 Dia. of thrust shaft under

collars 14 3/4 Dia. of screw 17-6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable No Total surface 98.2 sq. ft.

No. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 10 1/2, 14, 24, 5/2, 7, 8, 18 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four 3 1/2" diameter. In Holds, &c. 1, 8" in with oil tank, 2 @ 2 1/2" in aft hold on tunnel

No. of Bilge Injections 1 sizes 13" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes. 3 1/2"

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

Are all connections with the sea direct on the skin of the ship ship's side Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Both

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers None How are they protected Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Dates of examination of completion of fitting of Sea Connections 18/10/18 of Stern Tube 1/11/18 Screw shaft and Propeller 4/11/18

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from Entrance from main deck at each end.

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel J. Spencer & Son Ltd

Total Heating Surface of Boilers 7668 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 3/10/18 No. of Certificate 9159

Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 sq. ft. No. and Description of Safety Valves to

each boiler 3, direct spring Area of each valve 9.62 sq. ft. Pressure to which they are adjusted 185 lbs per sq. in. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 30" Mean dia. of boilers 15-6" Length 11-6" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 R lap

long. seams 5 rivets Diameter of rivet holes in long. seams 15/16" Pitch of rivets 9/8" Lap of plates width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 85.3 plate 85.6 Working pressure of shell by rules 182 lbs Size of manhole in end 16" x 12"

Size of compensating ring flange No. and Description of Furnaces in each boiler 3, Dightons Material Steel Outside diameter 50 3/16"

Length of plain part top 19 1/32" Thickness of plates crown 19 1/32" Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 188 Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Side 11 3/32" x 8 3/8" Back 10 1/4" x 8 3/8" Top 10 3/8" x 9 1/4" If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 180

Material of stays Steel Diameter at smallest part 2.75" Area supported by each stay 98 sq. in. Working pressure by rules 219 End plates in steam space:

Material Steel Thickness 1 1/32" Pitch of stays 20 1/2" x 2 1/2" How are stays secured Double nuts Working pressure by rules 192 Material of stay Steel

area at smallest part 8.48 sq. in. Area supported by each stay 4.46 sq. in. Working pressure by rules 199 Material of Front plates at bottom Steel

Thickness 31/32" Material of Lower back plate Steel Thickness 27/32" Greatest pitch of stays 13 5/8" x 8 3/8" Working pressure of plate by rules 187

Diameter of tubes 2 3/4" Pitch of tubes 4" x 3 7/8" Material of tube plates Steel Thickness: Front 31/32" Back 3/4" Mean pitch of stays 9 7/8"

Pitch across wide water spaces 13 5/8" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10" x 1 1/2" Length as per rule 35 9/16" Distance apart 10 5/8" Number and pitch of stays in each Three 9 1/4"

Working pressure by rules 187 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

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IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

2 connecting rod top bolts + nuts, 2 connecting rod bottom end bolts + nuts, 2 main bearing bolts + nuts, 6 coupling bolts + nuts, one feed pump section + one discharge valve, one bilge pump section and one discharge valve, 3 main check valves, 3 donkey feed check valves, 24 assorted bolts + nuts, 6 cylinder cover studs + nuts, 6 steam chest cover studs + nuts, 12 junk rings + studs + nuts, 5 bars round iron 3/8", 1/2", 5/8", 3/4" + 1" + one cast iron propeller as

The foregoing is a correct description,

For *Palmers Shipbuilding & Iron Co*
J. W. M. B.
Manager, Engine -

Manufacturer.

Dates of Survey while building: During progress of work in shops -- *1918. Apr. 3, 8, 24, 25, 29, May 3, 8, 10, 14, 17, 28, Jun 6, 7, 10, 13, 20, July 4, 10, 18, 23, 24, 26, 30, Aug 1, 2, 24, 28, 29, 30.*
During erection on board vessel --- *Sept 3, 4, 6, 10, 17, 20, 26, 27, Oct 2, 3, 10, 11, 16, 17, 18, 22, 23, 25, 26, 28, 29, 30, Nov 1, 4, 5, 6, 7, 8, 11, 14, 18, 19, 21.*
Total No. of visits *62 67*

Is the approved plan of main boiler forwarded herewith? *No*

Dates of Examination of principal parts: Cylinders *26/7, 3/9/18* Slides *26/7, 26/8/18* Overs *26/9/18* Pistons *3/6, 26/7/18* Rods *3/5, 26/8*

Connecting rods *5/5, 26/8/18* Crank shaft *7/6, 24/7* Thrust shaft *7/6, 22/10* Tunnel shafts *4/7, 10/7* Screw shaft *24/6, 29/6* Propellers *6/10, 28/10*

Stern tube *16/10, 22/10/18* Steam pipes tested *5/11, 19/10/18* Engine and boiler seatings *4/11, 7/11/18* Engines holding down bolts *7/11, 8/11/18*

Completion of pumping arrangements *Sunderland Report* Boilers fixed *Sunderland Report* Engines tried under steam *Sunderland Report*

Main boiler safety valves adjusted *Sunderland Report* Thickness of adjusting washers *Sunderland Report*

Material of Crank shaft *Stul* Identification Mark on Do. *216/23/7/8 + 32* Material of Thrust shaft *Stul* Identification Mark on Do. *216/23/7/8 + 32*

Material of Tunnel shafts *do* Identification Marks on Do. *216/23/7/8 + 32* Material of Screw shafts *do* Identification Marks on Do. *m 2190*

Material of Steam Pipes *Stul + Copper* Test pressure *540 + 360 lbs per sq. in.*

Is an installation fitted for burning oil fuel? *Sunderland Report* Is the flash point of the oil to be used over 150°F? *Sunderland Report*

Have the requirements of Section 49 of the Rules been complied with? *Sunderland Report*

Is this machinery duplicate of a previous case? *No* If so, state name of vessel *Standard 2 type*

General Remarks (State quality of workmanship, opinions as to class, &c.) *Work carried out at Jarrow.*

Stern tube, propeller shaft + propeller fitted, Main engines secured on board with the crank, thrust, Intermediate + prop shafts in line, thrust block and plummer blocks secured on stools, Main pumps, ballast pump, centrifugal pump, White's pumps for oil burning system, Horderns forced draught engine + fan, and the auxiliary condenser secured on board. Main boilers, uptakes + funnel placed on board. Main + auxiliary steam pipes tested to 540 + 360 lbs per sq. in. respectively. (To complete the survey at Sunderland all pipes (feed, bilge, tank, discharge, suction, main + auxiliary steam, waste steam and White's oil burning arrangements of pipes) in the engine and boiler space require to be examined in position, supported + stayed where necessary. The side stays to main boilers require to be fitted, the White system of oil burning requires to be tested under working conditions, the safety valves of main boilers require to be adjusted, the main engines + all auxiliaries in the E.B. space require to be tried under working conditions, the spare gear to be checked and all the requirements of

The amount of Entry Fee ... £ : :
Special ... £ 146 : 11 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *- 3 DEC 1918*
When received, *28.12.1918*

George Murdoch
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. 13 DEC. 1918*
Assigned *J. L. M. 12.18 J. L.*
Tested for Oil fuel 12.18 F.P. above 150°F



MACHINERY CERTIFICATE

SS War Pundit.

Continuation of Report No. ~~1144~~ dated ~~27~~ Dec^r on the

of the B class standard machinery be carried

The Surveyors, Sunderland, have been advised by letter dated the 28th ult of what was done at Jarrow and what remains to be done in order to complete the survey at Sunderland, as it was Mr HARRIS'S desire to complete the survey.

The machinery of this vessel has been constructed under special survey, the materials & workmanship are of good quality and has been securely fitted on board.

When the survey is completed at Sunderland, the machinery will in my opinion be eligible for record & L.M.C. 12.18 in red & fitted for oil burning and carrying oil above 150° Fahr^t in the register book.

5 forging & castings reports, one report on furnaces and steel mirrors now forwarded.

C. Murdoch

Sunderland

All the work mentioned for completion in this report has been carried out in a satisfactory manner and the machinery is eligible in my opinion for classification and the record & L.M.C. 12.18. Fitted for oil fuel 12.18. Flash P^t above 150° F.

W. Stuke

9.12.18



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